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Original Article

Physical self-description and sport participation, by gender, of university students

FRANCISCO CAMPOS[1], MARIANA MARQUES[2], SOFIA SILVA[3], FERNANDO MARTINS[4], VERA SIMÕES[5], SUSANA FRANCO[6]
[1,3,4] Polytechnic Institute of Coimbra, ESEC, IIA, RoboCorp, ASSERT, PORTUGAL
[2] Department of Medical Sciences, Aveiro, University of Aveiro, PORTUGAL
[3,4] Instituto de Telecomunicações, Delegação da Covilhã, PORTUGAL
[5,6] Sport Sciences School of Rio Maior, Polytechnic Institute of Santarém, PORTUGAL

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Abstract:
University students, who are regular sport participants, showed a superior and more positively physical self-description in body fat, general physical self-concept and self-esteem perception (Silva, Vicente, Amaro, & Campos, 2016). In another study with university students, in order to investigate what they think about their own physical appearance (Silva, Saenger, & Pereira, 2011), it was concluded that 63% of male and 67% of female students presents dissatisfaction, although for contradictory reasons (female students were dissatisfied due to overweight; male students were dissatisfied due to the thinness index).
Considering this, based on the presented studies, the aim of this research is to characterize and compare sport participants by gender - students of the Cuenca *Campus* of the *Universidad Castilla La Mancha* (Spain) - according 4 (four) dimensions of their physical self-description: (1) body fat; (2) general physical self-concept; (3) self-esteem; (4) physical appearance. It was applied a reduced version of the Physical Self-Description Questionnaire (PSDQ), translated to Spanish (Tomás, 1998). The data were collected from 175 university students (22,00±3,41 years old), regular sport participants (at least once per week): 86 females (21,15±1,99 years old) and 89 males (22,82±4,18 years old). After the application of the ANOVA one-way test is possible to confirm, comparing the male with the female sport participants, that there are no statistical significant differences in the dimensions: body fat (F=0,001; p=0,973); self-esteem (F=0,186; p=0,667); physical appearance (F=0,748; p=0,388). In contrast, there are statistical significant differences in general physical self-concept dimension (F=4,269; p=0,040), having the male participants a higher mean of answer values (M=4,643).
Key Words: Gender; Physical Self-Description; Sport Participation; University Student.

Introduction

The lifestyle concept refers to the usual and daily behaviors of an individual, a group or even a global society, which define their personal way of looking at and experiencing life, and that remain for several time (Fernández del Valle, 1996). Typically is defined as "a mode of living, a seemingly innocuous tautology, and then proceed directly to an eclectic and/or *ad hoc* set of measures" (Sobel, 1981, p. 16). The conceptualization of what effectively is a healthy lifestyle has been changing over the years, affected by the constant evolution of the society itself (Pastor, Balaguer, & Garcia-Merita, 1998).

Today, for instance, nutritional education, obesity and daily fitness activity, are some of the concepts related to a healthy lifestyle (George, Schneider, & Kaiser, 2016). The research of George et al. (2016) concludes that nutrition and fitness activity are important to obesity prevention in youth. Also related with healthy lifestyle in this perspective (nutrition and fitness activity as a preventive way to obesity) is physical self-description (Marsh, 1996; Marsh, Richards, Johnson, Roche, & Tremayne, 1994).
According to Mosquera, Stobäus, Jesus and Hermínio (2006), physical appearance, self-esteem and self-concept have different meanings, although sometimes are considered almost the same. For these authors, the physical appearance was the recognition that we make about ourselves, what we feel and how we feel about our abilities and attitudes. On the other hand, the self-esteem is understood as how much we like and enjoy ourselves as individuals. Also, physical appearance was defined by Tavares (2003) as a mental representation of the body identity, internal emotions, integrity and fragility of each individual, that can be interpreted considering others' opinions or even our own judgment about ourselves (Cash & Pruzinsky, 1990). The beauty pattern is constructed by a social imaginary, changing according different historical or social contexts. Image cares have been always associated with an empowerment feeling (Silva, Vicente, Amaro, & Campos, 2016). Appearance, beauty, look, image and well-being are very important and valued social concepts (Andrade & Bosi, 2003; Pereira, Graup, Lopes, Borgatto, & Daronco, 2009).

Corresponding Author FRANCISCO CAMPOS, E-mail: francicampos@esec.pt

Nowadays, lifestyle adopted by youth is, in part, based on their physical self-description - on their self-concept or self-esteem, for example - which is constantly shaped through social interactions. This issue may become a problem of mental health, with negative impacts on the individual itself and on the society in general (Goñi & Fernández, 2009). The sport activity have been used to reduce or increase the body weight, modifying the physical appearance of individuals dissatisfied with their own image (Damasceno, Vianna, Lacio, Lima, & Novaes, 2006; Hausenblas & Fallon, 2006). The sport activity should provide experiences that allow a positive perception of physical appearance, which implies becoming aware of our own feelings and physiological reactions (Tavares, 2003). In the investigation of Silva et al. (2016) is possible to verify that university students that practice sportive activities regularly have better results, when compared with non-participants, in the body fat perception, general physical self-concept, self-esteem and physical appearance. In the 4 (four) studied dimensions, were found statistical significant differences in 3 (three) of them: body fat (p=0,05); general physical self-concept (p=0,02); self-esteem (p=0,01). Considering this results it is possible to conclude that regular sport participants face their life in a positively perspective, according to the physical self-description mean values of body fat (obesity), general physical self-concept and self-esteem (Silva et al., 2016).

Also in a study with university students, in order to investigate what they think about their own physical appearance (Silva, Saenger, & Pereira, 2011), was identified that 63% of the male and 67% of the female students presents dissatisfaction. It is curious that the reasons for that are distinct and opposed. The female students were dissatisfied due to overweight. On the opposite, the male students were dissatisfied due to the thinness index (Silva et al., 2011).Based on that research conclusions (Silva et al., 2011; Silva et al., 2016), the aim of this investigation is to characterize and compare sport participants by gender - university students of the Cuenca *Campus* of the *Universidad Castilla La Mancha* (Spain) - according 4 (four) dimensions of their physical self-description (Marsh, 1996; Marsh et al., 1994): (1) body fat; (2) general physical self-concept; (3) self-esteem; and (4) physical appearance. It is expected to verify in which group (male or female) the mean values of answer are higher, according to the different dimensions under study, and then compare them to confirm if there are statistical significant differences between the 2 (two) groups, as concluded in Silva et al. (2011).

Material & Methods

Participants

All participants are university students of the Cuenca *Campus* of *Universidad Castilla La Mancha* - Spain, regular sport participants (at least once per week). Considering the aim of this research 175 university students were recruited (M±SD=22,00±3,41 years old), divided in 2 (two) groups: (1) male (n=89; M±SD=22,82±4,18); (2) female (n=86; M±SD=21,15±1,99).

Measurements

To understand the importance of some concepts - physical self-description for example (body fat, general physical self-concept, self-esteem or physical appearance) - the written survey (questionnaire) was methodologically used as a source of information (Tuckman, 2005). Considering the previously referred and the aim of this study, a translated and adapted version (Tomás, 1998) of the Physical Self-Description Questionnaire (PSDQ) (Marsh, 1996; Marsh et al., 1994) was applied. The applied questionnaire was a shorter version, with 20 items, grouped like the original version in 4 (four) dimensions: general physical self-concept (6 items), self-esteem (4 items), body fat (6 items) and physical appearance (4 items) (Silva et al., 2016).

Each item is assessed through a 6 points *likert* scale, where 1 means *totally false* and 6 *totally true*. For a better interpretation of the results, it is important to understand the answer scale. The dimensions body fat and self-esteem are constructed in an inverted scale. In other words, how much lower the obtained results are, better and more positively is the perception of these item and/or dimensions. For example, in the item "My waist is too wide", of the body fat dimension, if the inquired participant respond 1 (*totally false*) that answer is very positive. In this case, the denials of something negatively have to be considered positive perspectives. By contrast, general physical self-concept and physical appearance dimensions are developed in a normal scale, with the highest results being more positive. Therefore, to face a positively perspective, body fat and self-esteem must be closer to 1. In opposition, physical self-concept and physical appearance must be closer to 6.

Procedures

Data collected, by questionnaire, was prepared by 3 (three) students of the Sports and Leisure Degree of Education School - Polytechnic Institute of Coimbra, in scope of curricular international internship (Erasmus+ Programme) in *Universidad Castilla La Mancha* (Spain).

In a first phase, the sports office of the university was contacted by e-mail, exposing the aim, the scope, the methodology and the importance of this research, requesting authorization for data collection. In a second phase, after conceding the formal authorization, was requested the collaboration of some teachers in a random way, to schedule the questionnaire application. After the questionnaire adaptation process, explained in Silva et al. (2016), in a third and last phase, the participants were informed of the aim of the study and contextualized before started responding. Besides being clarified about the scope and aim of the study, all the participants were

sensitized to provide us conscious and truthful answers, in order to ensure the validity of the data and, with that, the conclusions and final considerations.

Statistical analysis

In the first analysis is intended to characterize the participants' answers, in total and by gender, per item and in each dimension (body fat, general physical self-concept, self-esteem and physical appearance). In the second analysis is intended to characterize and compare the participants' answers, according to their gender, confirming if there are statistically significant differences in each one of the 4 (four) physical self-description dimensions, measured by the PSDQ questionnaire (Marsh, 1996; Marsh et al., 1994).

In the first analysis are presented the minimum, maximum, mean and standard deviation values. In the second, beyond the mean and standard deviation for characterization purpose, are presented the results of the ANOVA one-way test application. This is a parametric test used to compare the means of 2 (two) or more groups from independent random samples (Maroco, 2010; Pestana & Gageiro, 2008). The comparison between the 2 (two) groups (male and female), in each one of the 4 (four) studied dimensions (body fat, general physical self-concept, self-esteem and physical appearance), was conducted with the statistical software Statistical Package for Social Sciences (SPSS), v.21, considering a statistical significance of 5% (p value≤0,05), like suggested by Maroco (2010) and Pestana and Gageiro (2008).

Results and Discussion

The results and discussion started with the values of the minimum (mi), maximum (ma), mean (M) and standard deviation (SD) for each one of the 20 (twenty) items and the 4 (four) dimensions (table 1), considering the total of the participants (n=175) and stratified by gender [male (n=89) and female (n=86)]. With this, is possible to verify which items and dimensions presents better and more positively results considering the singularity of the scale described in *Measurements* chapter (table 1).

Table 1. Minimum, maximum, mean and standard deviation values, by item and dimension

Item	Total (n=175)			Male (n=89)			Female (n=86)		
Dimension	mi	ma	M±SD	mi	ma	M±SD	mi	ma	M±SD
I am too fat	1	6	2,19±1,26	1	6	2,22±1,34	1	6	2,15±1,18
My waist is too wide	1	5	2,25±1,21	1	5	2,22±1,20	1	5	2,28±1,21
I have too much fat on my body	1	6	2,53±1,27	1	6	2,49±1,30	1	6	2,56±1,24
I weight too much	1	6	2,26±1,31	1	6	2,24±1,40	1	6	2,29±1,23
My belly is too big	1	6	2,30±1,25	1	6	2,31±1,35	1	5	2,28±1,13
People think I am fat	1	6	2,10±1,23	1	6	2,15±1,30	1	6	2,05±1,15
Body fat	1	6	2,27±1,14	1	6	2,27±1,22	1	6	2,26±1,06
Physically, I am satisfied with the type of person I am	1	6	4,55±1,10	2	6	4,64±1,04	1	6	4,45±1,15
Physically, I feel happy with myself	1	6	4,51±1,14	2	6	4,69±1,03	1	6	4,34±1,22
I feel satisfied with my appearance and with what I can do physically	1	6	4,42±1,12	1	6	4,60±1,08	1	6	4,23±1,12
Physically, I feel satisfied with myself	1	6	4,42±1,12	1	6	4,55±1,11	1	6	4,29±1,12
I feel satisfied with who I am and what I can do physically	1	6	4,62±0,97	2	6	4,76±0,92	1	6	4,48±1,00
I am satisfied with how I am physically	1	6	4,45±1,11	2	6	4,63±0,99	1	6	4,26±1,19
General physical self-concept	1	6	4,49±0,97	1	6	4,64±0,90	1	6	4,34±1,02
I feel that my life is not too useful	1	6	1,90±1,18	1	6	1,88±1,23	1	6	1,93±1,13
In general, I do not have much to be proud of	1	6	1,46±0,96	1	6	1,43±0,99	1	6	1,49±0,94
In general, I am a failure	1	6	1,43±0,88	1	6	1,45±0,94	1	5	1,42±0,82
Nothing I do seems to work out	1	6	1,91±1,04	1	6	1,84±1,03	1	6	1,98±1,04
Self-esteem	1	6	1,67±0,83	1	6	1,64±0,90	1	6	1,70±0,76
Given my age, I am attractive	1	6	4,59±1,10	1	6	4,52±1,19	1	6	4,49±1,01
I have a nice face	1	6	4,59±1,00	1	6	4,56±1,05	2	6	4,60±0,96
I am more handsome than most of my friends	1	6	3,98±1,23	1	6	4,17±1,20	1	6	3,79±1,24
I am handsome	1	6	4,46±1,05	1	6	4,54±1,13	1	6	4,38±0,96
Physical appearance	1	6	4,37±0,92	1	6	4,43±0,96	1	6	4,31±0,87

Based on the obtained results, and considering the total participants (n=175), is possible to verify that the items with better answer results are: (1) "People think I am too fat" (body fat dimension; M±SD=2,10±1,23); (2) "I feel satisfied with who I am and what I can do physically" (general physical self-concept dimension; M±SD=4,62±0,97); (3) "In general, I am a failure" (self-esteem dimension; M±SD=1,43±0,88); (4) "Given my age, I am attractive" and "I have a nice face" (physical appearance dimension; correspondingly M±SD=4,59±1,10 and M±SD=4,59±1,00). In the male gender (n=89), the items with higher answer results are: (1) "People think I am too fat" (body fat dimension; M±SD=2,15±1,30); (2) "I feel satisfied with who I am and what I can do physically" (general physical self-concept dimension; M±SD=4,76±0,92); (3) "In general, I do not have much to be proud of" (self-esteem dimension; M±SD=1,43±0,99); (4) "I have a nice face" (physical appearance dimension; M±SD=4,56±1,05). On the other hand, in the female gender (n=86), the items with better answer results are: (1) "People think I am too fat" (body fat dimension; M±SD=2,05±1,15); (2) "I feel satisfied with who I am and what I can do physically" (general physical self-concept dimension; M±SD=4,48±1,00); "In

general, I am a failure" (self-esteem dimension; *M*±*SD*=1,42±0,82); (4) "I have a nice face" (physical appearance dimension; *M*±*SD*=4,60±0,96). Table 2 presents the results (*M*±*SD*) in each one of the dimensions, also according to the total inquired university students, participants of sport activities (*n*=175), and in each one of the 2 (two) studied groups [male (*n*=89); female (*n*=86)]. Furthermore, are presented the *p* and *F* values, obtained through the ANOVA one-way test. The interpretation of these results allows to confirm or reject the possibility of statistically significant differences in each one of the 4 (four) dimensions evaluated by the PSDQ questionnaire (Marsh et al., 1994) (table 2).

Table 2. Mean and standard deviation (total participants and per group) and significance level.

Dimension	Total (*n*=175) *M*±*SD*	Male (*n*=89) *M*±*SD*	Female (*n*=86) *M*±*SD*	*p*	*F*
Body fat	2,27±1,14	2,27±1,22	2,26±1,06	0,973	0,001
General physical self-concept	4,49±0,97	4,64±0,90	4,34±1,02	0,040*	4,269
Self-esteem	1,67±0,83	1,64±0,90	1,70±0,76	0,667	0,186
Physical appearance	4,37±0,92	4,43±0,96	4,31±0,87	0,388	0,748

First of all, it is important to refer that is presented once more - like in table 1 - the mean and standard deviation obtained in each dimension, to characterize and better understand the differences between the 2 (two) groups. Considering the obtained results, presented in table 2, in general physical self-concept, self-esteem and physical appearance dimensions, the male university students presents better and more positively results (*M*±*SD)*, with statistical significant differences in general physical self-concept dimension (*F*=4,269; *p*=0,040). Emphasis to different mean values between male (*M*±*SD*=4,64±0,90) and female sport participants (*M*±*SD*=4,34±1,02). The results confirm, in part, the investigations mentioned before. Even with a peculiar different scope, that research (Silva et al., 2011) allows us to understand that female students have more difficulties to face problems related with their overweight, and as result, possibly also with their self-esteem and general physical self-concept. In the literature is possible to verify that the "good" physical appearance affects positively the self-esteem and the general physical self-concept (Cash & Pruzinsky, 1990; Goñi & Fernández, 2009; Mosquera et al., 2006; Pereira, Graup, Lopes, Borgatto, & Daronco, 2009; Tavares, 2003; Sobel, 1981).

Conclusions

Considering this investigation results it is possible to verify that of university students - regular sport participants (at least once per week) - the male students presents a better mean answer values in 3 (three) of the 4 (four) evaluated dimensions (general physical self-concept, self-esteem, and physical appearance), with statistical significant differences only in general physical self-concept dimension. Data allows to confirm that general physical self-concept is perceived in a significant different perspective between male and female university students (*F*=4,269; *p*=0,040), and that the male students face life with a more positive thinking, maybe not so affected by their general physical self-concept, self-esteem or/and physical appearance. These results raise some several important questions that must be object of our reflection. What are the main reasons for the statistical significant differences between male and female participants, in the - and only at the - general physical self-concept dimension? What are the main reasons for male sport participants present better values in the general physical self-concept, self-esteem and physical appearance? By other hand, what are the main reasons for the almost equal results in the body fat perception dimension? Reflecting about these questions, considering our empirical experience in the sports area and theoretical experience in the research development of these themes, some concepts arise and in some way may explain these results:

(1) The main reasons for practicing sport activities, which will possibly be different according to the gender. To improve health, to improve fitness, to relax, to have fun, to improve physical performance, to control weight, to improve physical appearance, and to be with friends are the 8 (eight) most important reasons for practice according the Eurobarometer (European Commission, 2014). Beyond that, in the same study, is concluded and referred that female participants might need more encouragement and support to be more physically active. For that, is possible that the main reasons for practice, different by gender, could influence the physical self-description perception;

(2) The different practiced sport activities and the time spent in practice (number of hours per training and number of training days per week). Today there is a social consciousness and knowledge of the regular sports practice benefits in general well-being and a healthy lifestyle. There are several researches and scientific facts that confirm how much positive is the regular participation in sport activity (American College of Sports Medicine, 2014). Considering that, it seems that persons that who are highly involved in sport activities may consider that they have a better and healthier lifestyle. In the opposite side, persons that don't practice any sport activities or have a low practice routine (once per week) may consider themselves "guilty" for that, affecting that also their physical self-description;

(3) The motor performance, in general more developed in the male gender (American College of Sports Medicine, 2014), could be another reason for the gender statistical differences. When are analyzed specific items - for example "I feel satisfied with who I am and what I can do physically" (general physical self-concept) and/or

"Nothing I do seems to work out" (self-esteem) - it is possible to verify and understand that motor performance is implicit. So, if the inquired participants don't feel pleased about their own motor performance or even don't feel confident enough, that will affect the answer to these specific items and, as result, the general dimension.
In future researches, these questions possible will take a part of the aim of some studies.
Concluding, nowadays there are scientific evidences of the importance of regular sport practice in the individual fitness improvement (American College of Sports Medicine, 2014). Regular sport practice should be taken as a rule, being part of all people daily life (children, youth, teenagers or elderly). For instance, the university students with a regular practice have a better self-esteem and physical appearance (Campos et al., 2016). Considering that, the universities must provide and create opportunities for a massive and regular sport practice. Opportunities that include all the students, regardless of gender, reasons for practice, preferences for some sports, available time, financial capacity, for example and among others. Mello, Moysés, and Moysés (2010) consider injudicious and unwise that university students could not have opportunities to engage in physical activity or sport practice during the years they spend on these organizations. These ideas support nowadays social extremely importance given to regular sport physical activities, as a way to reach well-being and a healthy lifestyle.

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